REMARKS

This is in response to the Office Action mailed on August 24, 2004, and the references cited therewith.

Claims 1, 5, 7-8, 27, 31, 33-34, 47-48, and 50-54 are amended, claims 3-4, 9, 29-30 and 35 are canceled, and no claims are added; as a result, claims 1-2, 5-8, 10-28, 31-34, 36-54 are now pending in this application.

§112 Rejection of the Claims

Claim 54 was rejected under 35 USC § 112, second paragraph, as it recites the limitation "the database" in page 101 (line 20, word 9), and because of insufficient antecedent basis for this limitation in the claim.

The Examiner is thanked for a careful review of the claims, and claim 54 has been amended as indicated above to address this rejection.

§103 Rejection of the Claims

Claims 1-18, 20-44 and 46-54 were rejected under 35 USC § 103(a) as being unpatentable over Cossins (U.S. 6,343,290) in view of Kapoor (U.S.5,884,038).

Claims 19 and 45 were rejected under 35 USC § 103(a) as being unpatentable over Cossins and Kapoor as applied to claim 1 above, and in further view of Zoken (U.S. 5,994,787).

Applicants do not admit that any one of the above references is prior art, and reserve the right to swear behind these references at a later date. Nevertheless, Applicants respectfully submit that the claims are distinguishable over the above references for the reasons argued below.

The M.P.E.P. states that:

> In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations**. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

An invention can be obvious even though the suggestion to combine prior art teachings is not found in a specific reference. *In re Oetiker*, 24 USPQ2d 1443 (Fed. Cir. 1992). At the same time, however, although it is not necessary that the cited references or prior art specifically suggest making the combination, there must be some teaching somewhere which provides the suggestion or motivation to combine prior art teachings and applies that combination to solve the same or similar problem which the claimed invention addresses. One of ordinary skill in the art will be presumed to know of any such teaching. (See, e.g., *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988) and *In re Wood*, 599 F.2d 1032, 1037, 202 USPQ 171, 174 (CCPA 1979)).

Applicants respectfully submit that the Office Action did not make out a *prima facie* case of obviousness for at least the following reasons:

(1) Even if combined, the cited references fail to teach or suggest all of the elements of Applicants' claimed invention;

(2) The cited references teach away from Applicant's claimed invention; and

(3) The cited references are nonanalogous art.

1. CLAIMED FEATURES LACKING IN COMBINATION

The reference (or references when combined) must teach or suggest all the claim elements. M.P.E.P. § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

Claim 1 of the present application recites:

"maintaining a database of network addresses and associated geographic locations;

receiving a query, including a network address, against the database for a geographic location associated with the network address;

logging information concerning the query received against the database; and

modifying geolocation activities relating to at least the network address based on the logged information,

wherein the geolocation activities include:

collecting network information pertaining to at least the network address; and

estimating the geographic location associated with the network address, based on the collected network information, and

wherein the modifying of the geolocation activities includes:

prioritizing the geolocation activities relating to at least the network address."
(Applicants' claim 1, Emphasis Added)

1.1 COSSINS DOES NOT TEACH GEOLOCATION ACTIVITIES THAT INCLUDE COLLECTING NETWORK INFORMATION PERTAINING TO THE NETWORK ADDRESS AND ESTIMATING A

GEOGRAPHIC LOCATION ASSOCIATED WITH THE NETWORK ADDRESS, BASED ON THE COLLECTED NETWORK INFORMATION.

The above-referenced Office Action contends that Cossins "further discloses the geolocation activities include collecting network information pertaining to at least the network address (generating a geospatial data based on network data, geographic data and performance elements and mapping to appropriate network elements, see col.6 line 21 to col.7 line 28)." (Office Action, Page 5, last paragraph-page 6, last paragraph).

Applicants respectfully disagree for a number of reasons. Firstly, the Office Action acknowledges that Cossins does not specifically disclose a query including a network address. For this reason alone, it stands to reason that Cossins cannot disclose collecting network information pertaining to a network address received in a query. The Applicants do, however, note to that the Office Action relies on Kapoor for disclosure of a query including an "Internet address". While the Applicants also disagree with this assertion, for reasons more fully set out below, Applicants also fail to see how Cossins could possibly describe the collection of network information, pertaining to a network address received in a query, in the absence of a disclosure within Cossins of a query including such a network address.

The Office Action also contends that Cossins "further discloses the geolocation activities include estimating the geographic location (utilizing the geocode generator (412 fig.4) to identify and to generate a geocode based on a search criteria including network information) associated with the network address, based on the collected network information (col.8 line 44 to col.9 line 44). (Office Action, page 7, second paragraph).

Applicants again strongly disagree that there is any disclosure in Cossins of estimating a geographic location, associated with a network address received in a query, based on the collected network information. Again, as noted in the Office Action, Cossins does not disclose receiving a network address in a query. Accordingly, it follows that Cossins cannot teach the

collection of network information pertaining to such network address, much less the estimating of a geographic location for such a network address received in a query.

Further, Cossins simply does not deal with estimating a geographic location. Instead, Cossins describes generating a geocode for received search criteria. This geocode, as far as the Applicants can discern, is a location identifier (e.g., a latitude and a longitude) that is already known and stored as geospatial data. Specifically, Cossins provides some description regarding a geospatial system (306) that communicates with the data management system to obtain known geospatial data. The geospatial system (306) is described as identifying and generating a geocode (e.g., longitude and latitude) for search criteria and identifying network elements located within a search range of the search criteria, and then generating images and text representing the identified network elements, along with associated performance elements.

In short, Cossins simply fails to provide any discussion regarding the estimating of a geographic location, associated with a network address received in a query, based on collected network information pertaining to the network address.

The Applicants have below reproduced portions of Cossins, with appropriate portions emphasized, to assist the Examiner in assessing the limited extent of the disclosure in this reference.

Cossins describes, in pertinent part, the following:

> "The geospatial system 306 receives and processes communications, including queries and data, from the communication system 302 and the data management system 304. The geospatial system 306 transmits communications, including queries and data, to the communication system 302 and the data management system 304. The geospatial system 306 communicates with the data management system 304 to obtain geospatial data. The geospatial system 306 identifies and generates a geocode, such as a latitude and longitude, for a search criteria, identifies network elements and any associated

performance elements and geographic elements located within a search range of the search criteria, and generates images and text representing the identified network elements, any associated performance elements, and the identified geographic elements. The images and/or the text are displayed as a map.

As used herein, generating a map also can be construed to mean generating data and/or signaling to be used by the user 106 to display a map, depending on context. Likewise, generating geospatial data, network data, or geographic data also can be construed to mean generating data to be used by the user 106 to display the geospatial data, network data, or geographic data, depending on context. Similarly generating network elements, performance elements, geographic elements, or data thereof, display elements, or display characteristics also can be construed to mean generating data and/or signaling to be used by the user 106 to display the network elements, performance elements, geographic elements, or data thereof, display elements, or display characteristics, depending on context. Thus, generating any data also means generating data and/or signaling to be used by the user 106 to display representations of the data, depending on context. The term transmitting and other like terms used to describe any communication transmitted or received by any element or component of a telecommunication system, including the GNMS, is used in a similar manner herein.

The GNMS 104A of FIG. 3 operates as follows. The user 106 transmits a search criteria to the communication system 302 in a communication. The communication system 302 processes the search criteria and transmits the search criteria to the geospatial system 306. The geospatial system 306 geocodes the search criteria, obtains network data and geospatial data from the data management system 304 corresponding to the geocode, and transmits the geocode, the network data, and the geospatial data to the communication system 302. The communication system 302 transmits the geocode, the network data, and the geospatial data to the user 106. The network data and the geospatial data are displayed for the user 106 as a map displaying network elements of a telecommunication network relative to other network elements, geographic elements, and customers. The

network elements may have associated performance elements, as described more fully below. The map also displays coverage areas, trouble areas, and layers of network data, including the display characteristics for network elements, performance elements, and geographic elements.

The user 106 navigates through other network data and geospatial data by selecting network elements on the displayed map or by using navigation tools. Additional communications are sent to the communication system 302 identifying the selections. The communication system 302 processes the communications, obtains network data and geospatial data from the geospatial system 306 or the data management system 304 and transmits the network data and the geospatial data to the user 106. In addition, the user can enter network data to configure parameters or components of network elements. This network data is transmitted in a communication to the communication system 302 for implementation and/or storage by the data management system 304. The network data and the geospatial data include, for example, performance data, statistical data, event data, configuration data, management data, geocode data, geographic data, and other data. In this manner, the user 106 can view, monitor, manage, and configure network data for network elements.

(Cossins, col. 6, ln. 21 – col. 7, ln. 10; Emphasis Added)

Cossins further describes the following:

"The geocode generator 412 identifies and generates a geocode, such as a latitude and a longitude, based on a search criteria. Alternately, the geocode generator 412 can be configured to identify and generate other geocodes, such as a location identifier that designates a geographic location, based on a search criteria. Examples of other location identifiers are latitude and longitude coordinates, north, south, east, west, up, down, left,

right, vertical and horizontal coordinates, North American data (NAD) 27, NAD 83, axial coordinates, other ordinate systems, positioning indicators, and mark identifiers.

The map generator 414 identifies network elements and geographic elements located within a search range of a geocode and generates a map having images and/or text representing the identified network elements, including any associated performance elements, and the identified geographic elements. The map may display multiple layers of network data, including trouble tickets, network trouble areas, network alarms, network performance, switch configuration, coverage levels, cell locations, and future cell sites in their proper geographic location. Other layers may exist that may be used to understand the network data and the geographic data."

(Cossins, col. 8, ln. 58 – col. 9, ln. 14; Emphasis Added)

1.2 KAPOOR DOES NOT TEACH A QUERY, INCLUDING A NETWORK ADDRESS.

The Office Action states that while Cossins does not specifically disclose a query including an Internet address, "Kapoor in the same network management system discloses a query including an Internet address [Client (101 fig. 1) issuing a Domain Name Server (105 fig. 1) resolution request for a IP address to a Domain Name Server, see fig. 1, col.1 lines 26-50 and col. 4 lines 9-54]." (Office Action, page3, last paragraph - page 4, first paragraph).

Applicants respectively disagree. Kapoor, with respect to FIG. 1, states that a client makes a DNS resolution request to a DNS server. A DNS resolution request in fact does not include an IP address, but instead includes a host name (e.g., www.2.Internet_Host_ABC.com), and is a request for an IP address for the relevant host name. Accordingly, the DNS resolution request referenced in the Office Action is in fact a request for an Internet address, as opposed to being a query including a network address, as required by claim 1.

Applicants have again reproduced the relevant portion of Kapoor below, emphasizing text in support of the Applicants' arguments presented immediately above.

Kapoor describes the following:

> " FIG. 1 is a block diagram that illustrates a client 101 trying to connect to a web server 103 of an Internet Host ABC. As shown in FIG. 1, client 101 makes a DNS resolution request 107 to DNS server 105 to request the IP address of web server 103. DNS server 105 returns the IP address response 109 in reply to the DNS resolution request 107."
>
> *(Kapoor, Col 1, lines 26-32, Emphasis Added).*

1.3 NEITHER COSSINS NOR KAPOOR, NOR THE COMBINATION THEREOF, TEACHES PRIORITIZING THE GEOLOCATION ACTIVITIES RELATING TO AT LEAST THE NETWORK ADDRESS.

The Office Action contends that Cossins "further discloses the modifying (configuration parameters) of the geolocation activities includes the geolocation activities relating to at least the network address (user can configure parameters or components of network elements based on geospatial data) (see col.6 line 58 to col.7 line 52)." The Office Action then goes on to acknowledge that "Cossins does not specifically disclose prioritizing the network activities. However, Kapoor in the same network environment discloses prioritizing the network activities (using a DNS for returning IP addresses in such a way that all web servers of an Internet host roughly get their "fair share," see fig. 1, col.1 lines 26-50 and col. 4 lines 9-54)." (Office Action, page 5, second paragraph).

Firstly, as argued above, Cossins does not teach geolocation activities that include collecting network information pertaining to a network address, or estimating a geographic location associated with a network address, based on the collected network information, as is required by claim 1. It follows that there can accordingly be no disclosure in Cossins of modifying such geolocation activities.

Secondly, the Applicants disagree that Kapoor, in the same network environment, discloses prioritizing network activities. Applicants have again below, with emphasis, reproduced the pertinent portions of Kapoor identified in the Office Action. While Kapoor does describe load balancing between web servers, this does not equate to the prioritization of network activities. Kapoor also discloses returning IP addresses, not in a random order, but in such a way that web servers of an Internet host get their "fair share". Applicants take this to mean that, where multiple web servers are associated with a particular Internet host, the DNS servers return IP addresses in a "load balancing" manner so as to evenly and fairly distribute requests among a collection of web servers associated with an Internet host. Accordingly, as opposed to disclosing the prioritization of the network activities, Kapoor is concerned with the even distribution and balancing of loads across multiple web servers.

Applicants, in support of the above arguments, specifically note that Kapoor describes the following:

> "FIG. 1 is a block diagram that illustrates a client 101 trying to connect to a web server 103 of an Internet Host ABC. As shown in FIG. 1, client 101 makes a DNS resolution request 107 to DNS server 105 to request the IP address of web server 103. DNS server 105 returns the IP address response 109 in reply to the DNS resolution request 107. After client 101 has received the IP address response 109 of web server 103, client 101 sends the hypertext transfer protocol (HTTP) request 111 to web server 103, which is addressed by IP address included in IP address response 109, and web server 103 therefore responds with an HTTP response 113 as shown in FIG. 1.

Although there is a vast number of Internet or WWW sites around the globe, a considerable amount of Internet traffic is served by a small proportion of those sites. As a result, it is desirable for these Internet of WWW sites to have high reliability as well as fast response times. As such, many Internet sites run multiple web servers that serve identical content. By distributing the workload between multiple web servers, an overall site can generally handle more requests than a single web server, each of which has a unique IP address, and the failure of a single web server may not necessarily result in the entire site of an Internet host being down."

(Kapoor, col. 1, lns. 25-50)

One embodiment of the present invention provides an improved method for providing IP addresses by modifying existing DNS servers, and without any changes to clients, to solve the problems associated with present day DNS servers. In one embodiment, a DNS server capable of balancing the workload between multiple web servers in a fault tolerant and reliable way is described. The DNS has the ability to adapt to varying loads between client domains and ISPs. Instead of returning the IP addresses in a random order in response to a DNS resolution request, a DNS in accordance with one embodiment of the present invention returns IP addresses in such a way that all web servers of an Internet host roughly get their "fair share," thereby reducing DNS traffic at the same time.

(Kapoor, col. 4, lns. 9-22)

2. THE CITED REFERENCES TEACH AWAY FROM APPLICANTS' CLAIMED INVENTION.

A factor cutting against a finding of motivation to combine or modify the prior art is when the prior art teaches away from the claimed combination. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from

following the path set out in the reference, or would be led in a direction divergent from the path the applicant took. *In re Gurley*, 27 F.3d 551, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994); *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966); *In re Sponnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (C.C.P.A. 1969); *In re Caldwell*, 319 F.2d 254, 256, 138 USPQ 243, 245 (C.C.P.A. 1963).

Applicants contend that Kapoor in fact teaches away from the claimed combination for at least two reasons. Firstly, as noted above, Kapoor is concerned with DNS resolution requests, which are in fact requests to retrieve an IP address. This is in direct contrast to the claimed invention, which is concerned with a query that includes a network address, the query being for a geographic location associated with the network address.

Secondly, Kapoor as noted above, is not concerned with the prioritization of network activities, but is instead concerned with load balancing which seeks to ensure that a particular web server is not given priority, or otherwise unduly burdened, relative to other web servers. For at least the above reasons, a person of ordinary skill, when reading Kapoor, would be lead in a direction divergent from the claimed invention.

3. OTHER CLAIMS

While the above arguments have been presented specifically with respect to claim 1 of the present application, the other independent claims of the present application each include similar limitations. Accordingly, the Examiner is respectfully requested to consider the above remarks with respect to these further independent claims.

The dependent claims of the present application include, either directly or indirectly, the limitations of the independent claims argued above to be patentable over the three cited references. These dependent claims are accordingly also considered patentable in view of the additional elements (or limitations) which they provide to a patentable combination. If any independent claim is non-obvious under 35 U.S.C. Section §103, then any claim depending there

from is also non-obvious. M.P.E.P. Section §2143.03.

Conclusion

Applicants respectfully submit that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at 408-333-9972 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 24th day of January, 2005.

Dawn R. Shaw — Dawn R. Shaw

Name — Signature